AMENDMENTS TO THE SPECIFICATION

On page 11, please delete the first paragraph and insert the following:

-- Lastly, severely cracked blades include, but are not limited to, blades having tips which have completely fallen off due to mechanical stress acting on the blades. These blades are substantially equivalent to gunked blades. However, they are not useful for cutting/coagulating tissue in longitudinal directions. Such blades appear to behave similarly in that they present improved (if only marginally) impedance characteristics at higher excitation levels, and their frequency of resonance is not affected by higher excitation levels. However, they can be differentiated from gunked blades due to their extremely high impedance level. This requires absolute measurements, but only coarse levels of precision are required. Generally, the resonance frequency of the transducer or blade is shifted far away from the normal resonance that is typically used for a specific ultrasonic system. This shift is usually a downward shift of the resonance frequency of about 2 kilohertz. When excited with a higher level of current and compared with a lower level of current, the impedance magnitude, resonance frequency and maximum phase at resonance are quantitatively far different than the corresponding characteristics of blades which are only gunked (see FIG. 3 and compare the impedance *vs.* frequency plot shown in M to the impedance *vs.* frequency plot shown in N, and compare the phase vs. frequency plot shown in O to the phase vs. frequency plot shown in P). In this case, the hand piece/blade typically possesses a magnitude of impedance at resonance which is approximately 400 ohms higher for cracked blades than that of heavily gunked but otherwise good blades. Of note, Figs. 1-3 show values that ~~are~~ exemplify a particular US system, and absolute values are dependent upon ~~actual~~ the actual design of the system. --

On page 13, please delete the second paragraph and insert the following:

-- FIG. 4 is an illustration of a system for implementing the method in accordance with the invention. By means of a first set of wires in cable ~~20~~ 26, electrical energy, i.e., drive current, is sent from the console 10 to a hand piece 30 where it imparts ultrasonic longitudinal movement to a surgical device, such as a sharp scalpel blade 32. This blade can be used for simultaneous dissection and cauterization of tissue. The supply of ultrasonic current to the hand piece 30 may be under the control of a switch 34 located on the hand piece, which is connected to the generator in console 10 via wires in cable ~~20~~ 26. The generator may also be controlled by a foot switch 40, which is connected to the console 10 by another cable 50. Thus, in use a surgeon may apply an ultrasonic electrical signal to the hand piece, causing the blade to vibrate longitudinally at an ultrasonic frequency, by operating the switch 34 on the hand piece with his finger, or by operating the foot switch 40 with his foot. --

On page 16, bridging page 17, please delete the last paragraph and insert the following:

-- The signals from current sense 88 and voltage sense 92 are also applied to respective zero crossing detectors 100, 102. These produce a pulse whenever the respective signals cross zero. The pulse from detector 100 is applied to phase detection logic 104, which can include a counter that is started by that signal. The pulse from detector 102 is likewise applied to logic circuit ~~104~~ 106 and can be used to stop the counter. As a result, the count which is reached by the counter is a digital code on line 104, which represents the difference in phase between the current and voltage. The size of this phase difference is also an indication of resonance. These signals can be used as part of a phase lock loop that cause the generator frequency to lock onto resonance, e.g., by comparing the phase delta to a phase set point in the DSP in order to generate a frequency signal to a direct digital synthesis (DDS) circuit 128 that drives the push-pull amplifier 78. --